

**On a small collection of Parthenopidae from Indonesia,
with description of a new species of *Pseudolambrus*
(Crustacea: Decapoda: Brachyura)**

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Abstract.—The present paper reports on a small collection of parthenopid crabs from Indonesia. While most of the species have been recorded before, one species, *Platylambrus tumidus* (Lanchester, 1900), is new for the country, while another, *Pseudolambrus sundaicus*, is described as a new species. The latter species differs from all congeners by the structure of the carapace, chelipeds and ambulatory legs.

The parthenopid fauna of Indonesia is remarkably diverse, and 44 species and subspecies are now known (see Flipse 1930, Chiong & Ng 1998). Recently, the authors had an opportunity to study a small but interesting collection of parthenopid crabs in the collection of the Research and Development Centre for Oceanology in Jakarta, Indonesia, which had been collected from various parts of Indonesia. While most were known species, one proved to be a new record, and another, a species of *Pseudolambrus* Paulson, 1875, is here described as new.

The terminology and generic system used here follows that proposed by Ng & Rodríguez (1986). The measurements listed in the material examined are of the carapace width (inclusive of spines and/or teeth) by carapace length (tip of rostrum to posterior margin of carapace). The terminology used follows that proposed by Flipse (1930) with modifications by Ng (1996). The genus *Aethra* Latreille, 1816, classified in the Parthenopidae by many authors, is now regarded as belonging to its own family (Ng & Rodríguez 1986, Guinot & Bouchard 1998). Synonymies are not provided, with most of the information for the species

treated here already present in Flipse (1930) and Tan et al. (1999). Specimens examined are deposited in the Research and Development Centre for Oceanology (RDCO), Indonesian Institute of Sciences, Jakarta, Indonesia; Museum Zoologicum Bogoriense (MZB), Cibinong, Indonesia; Muséum national d'Histoire naturelle (MNHN), Paris, France; and Zoological Reference Collection (ZRC) of the Raffles Museum, National University of Singapore.

Taxonomic Account

Daldorfia horrida (Linnaeus, 1758)

Material examined.—1 male (87.4 × 67.0 mm) (RDCO), 08°37'00"S, 138°18'00"E, mud, coll. research vessel R.I. Jalanidhi, 10 Dec 1967; 1 male (32.4 × 25.0 mm) (ZRC 1999.1459), 1 male (74.7 × 54.4 mm) (RDCO), Pulau Pari, coll. Sukardi, 21 Oct 1973; 1 male (31.2 × 23.5 mm) (RDCO), Pulau Belang Belang, among coral, coll. M. K. Moosa, 6 Nov 1980.

Remarks.—This widely distributed Indo-Pacific species is often common in coral reefs. In the present material, smaller specimens tend to have less eroded carapaces and more distinctly triangular carapaces,

and the chelipeds are also proportionately shorter, with the granules less prominent (Tan et al. 1999).

Platylambrus echinatus (Herbst, 1790)

Material examined.—1 male (43.5 × 33.7 mm) (RDCO), 02°09'00"S, 108°00'00"E, 15 m, 11 Oct 1967.

Remarks.—The taxonomy of this wide ranging Indo-West Pacific species has been discussed by Tan et al. (1999).

Parthenope longimanus (Linnaeus, 1758)

Material examined.—1 female (26.1 × 23.4 mm) (RDCO), Dobo, 10–15 m, coll. Jean, May 1967; 1 male (28.9 × 25.7 mm) (ZRC 1999.1460), 1 male (34.3 × 26.6 mm.), 1 female (36.3 × 32.6 mm) (RDCO), 03°08'08"S, 111°12'08"E, coll. 17 Apr 1973; 1 female (29.0 × 25.8 mm) (RDCO), South Kalimantan, 30 Feb 1982.

Remarks.—This common species has a wide distribution in the Indo-West Pacific, and the problems with its taxonomy have been summarized by Tan et al. (1998).

Platylambrus tumidus (Lanchester, 1900)

Lambrus tumidus Lanchester, 1900: 727, pl. 44, fig. 2.

Material examined.—3 males (31.9 × 23.2 mm, 31.0 × 23.1 mm), 1 female (21.4 × 16.1 mm) (RDCO), 1 male (31.5 × 23.1 mm), 1 female (30.1 × 23.0 mm) (ZRC 1999.1461), Malaka Strait (= Straits of Malacca), coll. R/V *K. M. Madidihang*, 22 Jan 1980.

Remarks.—Many of the older records of *Platylambrus carinatus* (H. Milne Edwards, 1834) and *P. validus* (De Haan, 1839) from Southeast Asia probably refer to *P. tumidus* (Lanchester, 1900), instead, a species first described from Singapore, where it can be quite common (P. K. L. Ng, pers. observation). The presence of this species in the Indonesian part of the Malaka Strait is thus not surprising. *Platylambrus tumidus* is superficially similar to *P. carinatus* and *P.*

validus, and can be easily confused with them. It is formally recorded from Indonesia for the first time. Thus far, *P. carinatus* is known for certain only from the Indian Ocean while *P. validus* is only known for certain from the East China Sea and adjacent areas (Tan et al. 1999).

Pseudolambrus sundaicus, new species
Figs. 1–3

Material examined.—Holotype: male (14.7 × 13.3 mm) (MZB 1429), Pulau Ayer islands, Jakarta Bay, Java, 05°45'S 106°37'E, coll. K. Rohmimohtarto, 25 May 1971. Paratypes, 1 male (12.3 × 10.8 mm), 1 female (10.1 × 9.6 mm) (MNHN), same data as holotype. Non-type:—1 juvenile female (7.8 × 7.5 mm) (MZB), Pulau Kongsi, 5°51'S 106°36'E, Java Sea, intertidal, muddy sand, coll. M. K. Moosa, 26 Sep 1972.

Description of male.—Carapace subtriangular, angle between antero- and posterolateral margins clearly demarcated, angular; dorsal surfaces covered with scattered flattened granules, striae and subsquamate tubercles, granules more pronounced along ridges; progastric, mesogastric, metagastric, mesobranchial, metabranchial, cardiac and intestinal regions distinct, raised; metagastric region separated from cardiac region by shallow groove; cardiac region inflated, protruding obliquely posteriorly, separated from intestinal region by shallow groove; cardiac region separated from branchial regions by deep, relatively broad groove posteriorly, more shallow anteriorly; intestinal region transversely narrow, surface granular. Front deflexed, appearing triangular in dorsal view, weakly trilobate in frontal view, median lobe granular, lateral margins weakly granulate, appearing entire; dorsomedian surface with distinct longitudinal depression. Supraorbital margin with 2 deep, narrow clefts; external orbital tooth low but distinct. Hepatic region not swollen, gently granular, relatively entire, clearly demarcated from anterolateral margin by narrow, sinuous cleft.

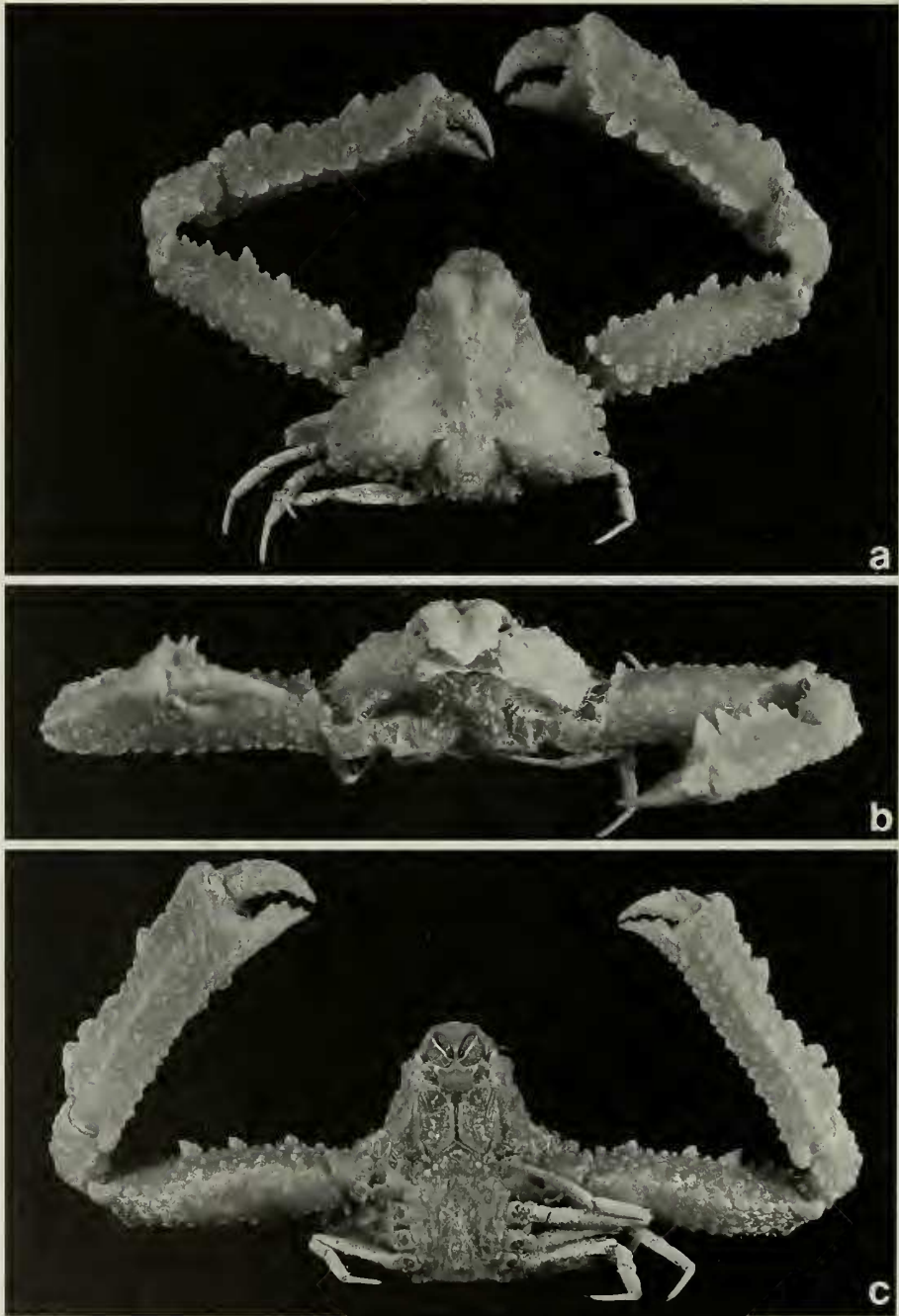


Fig. 1. *Pseudolambrus sundaicus*, new species. Holotype male (14.7 by 13.3 mm) (MZB 1429). a, dorsal view; b, frontal view; c, ventral view.

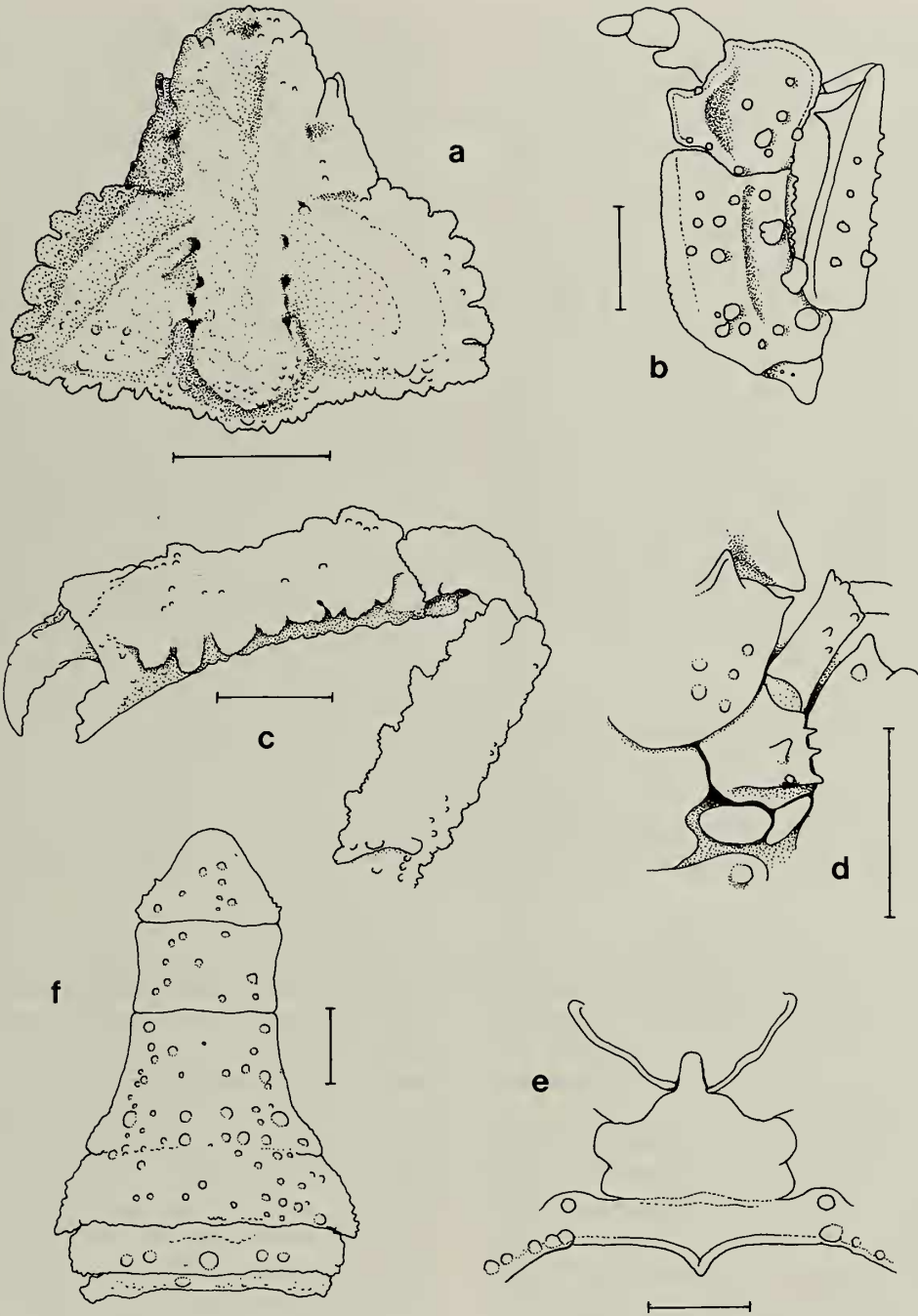


Fig. 2. *Pseudolambrus sundaicus*, new species. Holotype male (14.7 by 13.3 mm) (MZB 1429). a, carapace; b, left third maxilliped; c, right cheliped; d, antennae; e, epistome; f, abdomen. Figures a, b, f, only major granules and regions drawn. Scales: a, c = 5.0 mm; b, d, e, f = 1.0 mm.

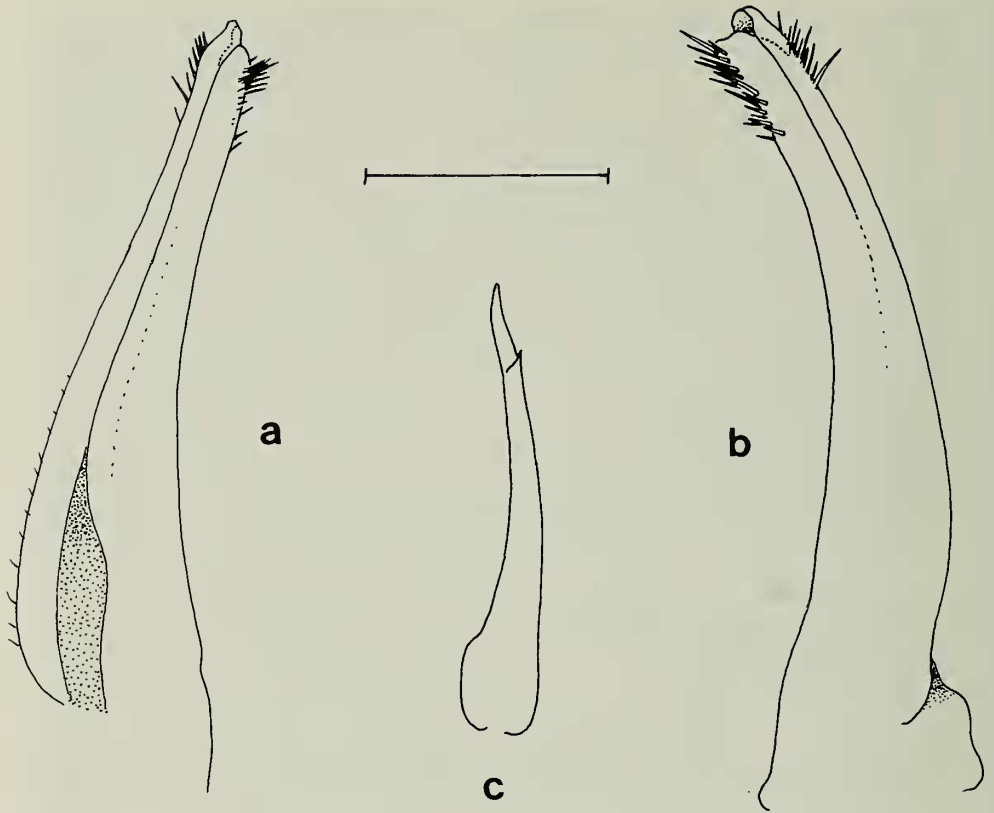


Fig. 3. *Pseudolambrus sundaicus*, new species. Holotype male (14.7 by 13.3 mm) (MZB 1429). a, left male first pleopod (ventral view); b, left male first pleopod (dorsal view); c, left male second pleopod (dorsal view). Scale = 1.0 mm.

Anterolateral margin arcuate, dentate, with 7 or 8 unevenly shaped teeth, with margins finely granulated; teeth gradually becoming larger from anterior to posterior. Posterolateral margin very gently converging towards posterior carapace margin, appearing somewhat subparallel with posterior carapace margin; with 3 or 4 small teeth. Posterior carapace margin with 3 low rounded granules. Branchiostegal surface with prominent sublamelliform tooth which holds cheliped when pushed backwards. Pterygostomial and sub-branchial surfaces granular, but without prominent spines, large teeth or tubercles.

Antennules folding at ca. 45° angle; anterior rim of basal segment cristate. Second antennal segment subquadrate, outer lateral margin with 3 sharp teeth, submedian sur-

face with 2 granules, the anterior one of which is larger and sharper; third antennal segment slightly dorsoventrally flattened, rectangular, anterointernal angle with 3 low tubercles, submedian surface with 3 low granules. Epistome smooth, length subequal in length to width; posterior margin with distinct median lobe.

Outer surfaces of third maxillipeds granular, with granules on outer margins larger. Ischium subrectangular, with relatively deep, oblique median sulcus, clearly separated from basis. Merus subquadrate, with oblique submedian depression; antero-external angle weakly auriculiform. Exopod relatively broad, distal part antero-external angle of merus.

Anterior thoracic sternites with numerous small and large rounded granules; sternites

1 and 2 completely fused; suture between sternites 2 and 3 fused but with shallow median transverse depression demarcating them, suture between sternites 3 and 4 fused but demarcated by shallow transverse groove; sutures between sternites 4–6 medially interrupted; sutures between sternites 6 and 7, and 7 and 8 complete, sternite 8 with deep longitudinal groove.

Right cheliped larger than left. Basis-ischium fused, anterior surface granular. Merus trigonal in cross-section; dorsal and outer surfaces gently granular; surfaces inner margin (between dorsal and inner facets) with 2 large submedian teeth and several smaller teeth, all of which are granular; outer margin (between dorsal and outer facets) with numerous small, low teeth of varying sizes. Carpus with outer surfaces weakly granular, broader distally; inner distal angle with low but distinct tubercle. Manus of larger cheliped trigonal in cross-section; outer and dorsal surfaces gently granular; inner margin (between dorsal and outer facets) with 8 large, lamelliform teeth, those distally larger, more prominent and more clearly demarcated from the rest; outer margin (between dorsal and outer facets) with 3 low teeth; lower margin (between outer and inner facets) gently serrated; outer surface with longitudinal median row of low, rounded granules. Manus of smaller cheliped more slender than larger one, other structures similar but lobes and teeth generally smaller. Fingers relatively short, strongly curved; dactylus strongly curved, distal part of dorsal margin with several rounded granules arranged approximately in 2 indistinct ridges, cutting edge with 3 low teeth and several denticles; pollex shorter than dactylus, cutting edge with 3 prominent teeth, tip hooked upwards.

Ambulatory legs slender; first leg longest. Margins of meri uneven but not distinctly serrated or dentiform; dorsal margin subcristate. Dorsal margin of carpus with 2 or 3 low granules. Dactyli subequal in length to propodus, both articles unarmed; dactylus smooth, styliform.

Male abdomen subtriangular; surface granular, lateral margins lined with granules and short spines. Segment 1 very narrow longitudinally; segment 2 transversely rectangular. Segments 3–5 completely fused, sutures not discernible except for lateral parts of that between segments 3 and 4; lateral margins of segment 3 gently convex, posterolateral angle distinctly produced; lateral margin of fused segments 4 and 5 gently concave. Segment 6 broader than long, lateral margins gently concave. Telson triangular, tip rounded, lateral margins almost straight.

Male first pleopod relatively stout, gently sinuous, tip subtruncate, divided into 2 lobes, outer lateral margins of both lobes lined with numerous stiff setae. Male second pleopod relatively short, ca. 0.6 times length of male first pleopod, distal segment short, ca. 0.25 times length of basal segment.

Female.—The paratype female specimen (MNHN) agrees with the type males in all carapace and ambulatory leg features. The only major difference is that the chelipeds of the female are proportionately shorter. This is especially for the manus of the larger chela.

Remarks.—*Pseudolambrus* Paulson, 1875 (= *Parthenolambrus* Miers, 1879; *Parthenopoides* Miers, 1879), is a very problematic genus, with the degree of infraspecific variation in some species very substantial (e.g., see Monod 1956, Manning & Holthuis 1981, Campbell & Stephenson 1970, Chia & Ng 1993). The validity of the generic synonymy must also be reassessed as it is very unlikely that the genus as presently recognised is monophyletic (P. K. L. Ng & S. H. Tan, pers. observations). Currently, some 29 species and subspecies are classified in *Pseudolambrus* (Flipse 1930, Monod 1956, Sakai 1969, Takeda 1977, Manning & Holthuis 1981).

Pseudolambrus sundaicus, new species, is most similar in general morphology to *P. beaumonti* (Alcock, 1895), especially with regards to the triangular carapace shape and

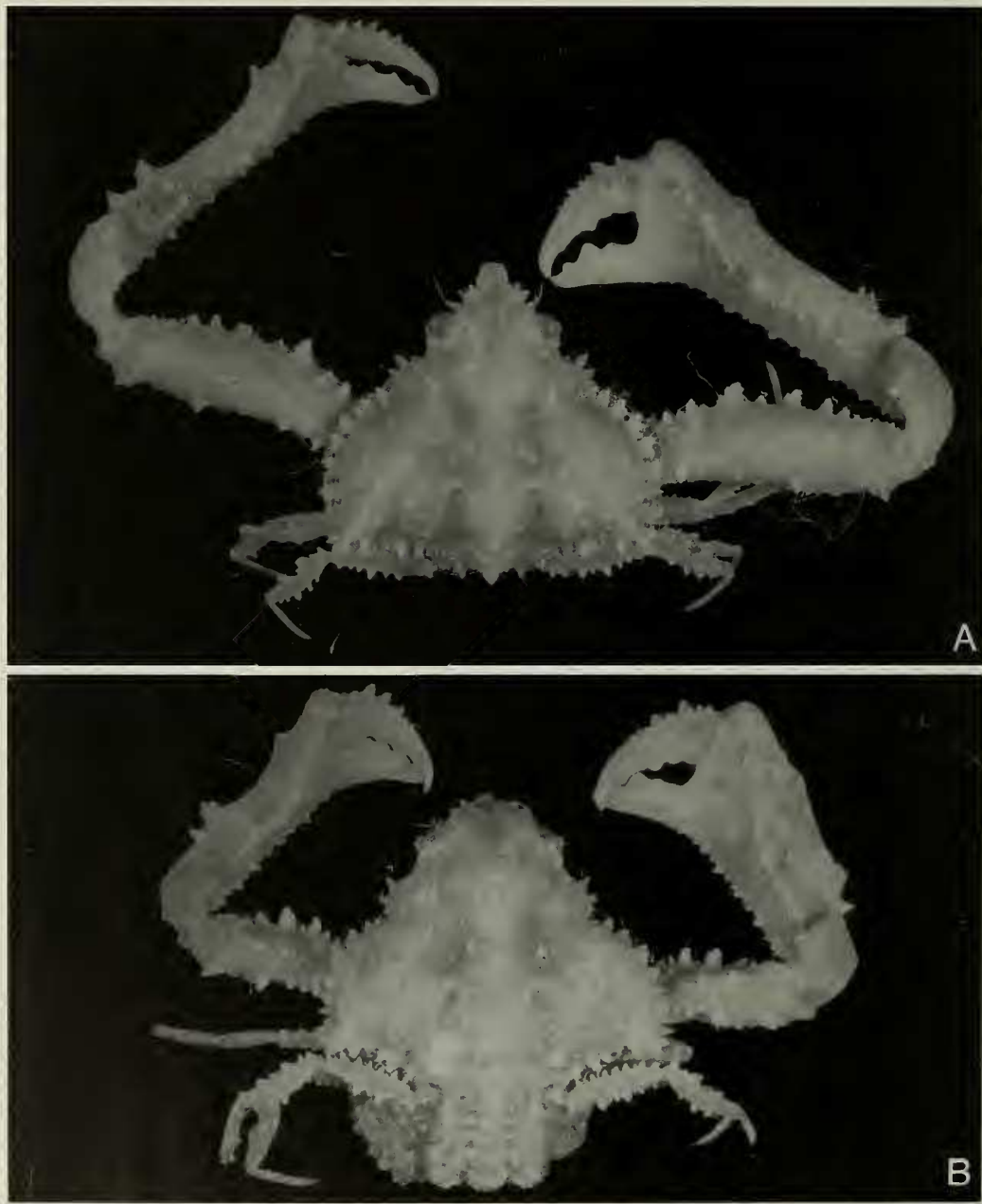


Fig. 4. *Pseudolambrus beaumonti* (Alcock, 1895), syntypes (Zoological Survey of India, Calcutta, catalogue number 11-13/10). A, male (11.3 by 10.5 mm); B, female (9.4 by 9.1 mm).

relatively elongate chelipeds (see Fig. 4; Alcock 1895, Sakai 1976). In most *Pseudolambrus* species (including the type species of the genus, *Parthenope calappoides* Adams & White, 1848), however, the chelipeds are proportionately shorter for both

sexes. *Pseudolambrus sundaicus*, however, can easily be separated from *P. beaumonti* by its relatively broader carapace, more deflexed front which appears almost evenly triangular from dorsal view (against distinctly trilobed with dentiform lateral mar-

gins), higher branchial regions, the hepatic margin being granular but not serrated or spiniform, inner dorsal margin of the chela has distinct, almost petaliform lobes (against the presence of distinct triangular teeth), and the ambulatory merus, carpus and propodus are not armed with prominent spines and teeth.

Pseudolambrus sundaicus is also similar to *P. massena* (Roux, 1830) (Monod 1956, Manning & Holthuis 1981) with regards to its carapace physiognomy, simple front and form of the ambulatory legs. *Pseudolambrus sundaicus*, however, differs from *P. massena* in its more deflexed front, having the posterolateral margin straighter and subparallel with the posterior carapace margin, the carapace distinctly more triangular in shape (against gently converging towards posterior carapace margin and somewhat more hexagonal in shape), and the chelipeds being proportionately longer (cf. Monod 1956, Manning & Holthuis 1981).

The broader than long carapace shape of *P. sundaicus* is diagnostic for this species. Most other *Pseudolambrus* species have carapace widths and lengths subequal, or the carapace is longer than broad. Only in *P. beaumonti* or the very different looking American *P. triangula* (Stimpson, 1860), are their carapace shapes even approaching that of *P. sundaicus* (cf. Garth 1958).

A small juvenile female specimen of *Pseudolambrus* from near the type locality of *P. sundaicus* agrees with the holotype of this species in most aspects. However, its only one cheliped is relatively longer and more slender than that of the holotype male of *P. sundaicus*. Although this is probably size related variation, we prefer not to include it in the type series.

Etymology.—The species name is derived from the Sunda Shelf.

Rhinolambrus longispinis (Miers, 1879)

Material examined.—1 male (42.3 × 41.5 mm) (RDCO), 01° 07' S 105° 06' E, otter trawl, sand, 22 m, coll. R. I. J. Alanidhi, 4

Oct 1967; 1 male (24.1 × 24 mm) (RDCO), Jepara, coll. R/V *Samudera*, 14 Oct 1976.

Remarks.—This species has a wide distribution in the Indo-West Pacific. It closely resembles *R. contrarius* (Herbst, 1804) and the differences between the two have been discussed by Tan et al. (1999).

Rhinolambrus turriger (Adams & White, 1848)

Material examined.—1 male (9.8 by 11 mm) (RDCO), 07° 41' 38" S, 113° 15' 34" E, 27–23 m, coll. 6 Sep 1975.

Remarks.—This common species has been reported from various parts of the Indian Ocean, Indonesia and Australia. The strength of the spines on the branchial and gastric regions can vary substantially, from very long and spiniform to low and tubercular (S. H. Tan & P. K. L. Ng, pers. observations).

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